AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently Amended) A channel equalizer[[,]] comprising:

an equalizer filter for correcting an error upon receipt of a signal transmitted by a sending end;

a decision-directed (DD) slicer for calculating a first error upon receipt of the corrected signal from the equalizer filter;

a Sato slicer for calculating a second error upon receipt of the corrected signal from the equalizer filter; and

a DD error size calculation unit for taking the absolute value of a ~~the~~ real part and an imaginary part of the first error calculated from the DD slicer, and summing the absolute value of the real part and the absolute value of the imaginary part of the first error to obtain a sum ~~them, and then obtaining the absolute value of the error~~.

2. (Currently Amended) An error control method for a channel equalizer, comprising the steps of:

generating an error corrected signal by an equalizer filter;

multiplying a first error calculated from a decision-directed (DD) slicer and a second error calculated from a Sato slicer using the error corrected signal, ~~each~~ by first and second ~~a~~ scale constants, respectively;

taking the absolute value of a ~~the~~ real part and an imaginary part of the first error calculated from the DD slicer, and summing the absolute value of

the real part and the absolute value of the imaginary part of the first error to obtain a sum ~~them, and then obtaining the absolute value of the first error~~;

obtaining the absolute value of an inverse response signal of a channel by multiplying the sum ~~absolute value of the first error~~ by the second error multiplied by the second scale constant and adding the resultant value to the ~~a~~ first error multiplied by the first scale constant; and

generating a filter tab coefficient to reproduce a signal transmitted from a sending end by feeding back the absolute value of the inverse response signal of the channel ~~signal~~ to the equalizer filter.

3. (Currently Amended) The method according to claim 2, wherein the equation for obtaining the inverse response signal of the channel and the equation for generating the sum are ~~taking the absolute value of the real part and imaginary part of the first error will be~~ expressed by:

$$e_k^G = k_1 e_k + k_2 |e_k| e_k^S$$

$$|e_k| = |e_I| + |e_Q|$$

where e_k^G is a G-pseudo error representing the inverse response signal of the channel of a ~~the~~ current time, e_k is the ~~a~~ first error calculated from the DD slicer of a ~~the~~ current time, e_K^S is the ~~a~~ second error calculated from the Sato slicer of a ~~the~~ current time, e_I is the real part of the first error calculated from the DD slicer, and e_Q is the imaginary part of the first error calculated from the DD slicer~~; and~~

~~where the number of gates is reduced and operating time or complexity is improved by taking the absolute value of the real part and imaginary part of the first error and adding them~~.

4. (Currently Amended) The method according to claim 2, wherein the size of the first error and the size of the second error are adjusted ~~to a similar~~

~~size~~ by setting the size of the first scale constant to be ~~by which the first error calculated from the DD slicer is multiplied~~ 3-4 times larger than the size of the second scale constant ~~by which the second error calculated from the Sato slicer is multiplied~~.

5. (New) The channel equalizer according to claim 1, wherein the first and second errors are a DD error and a Sato error, respectively.

6. (New) The channel equalizer according to claim 1, further comprising:

a first multiplier to multiply the second error output from the Sato slicer by a first scale constant; and

a second multiplier to multiply a resultant output of the first multiplier by the sum output from the DD error size calculation unit.

7. (New) The channel equalizer according to claim 6, further comprising:

a third multiplier to multiply the first error output from the DD slicer by a second scale constant; and

an adder to add a resultant output of the third multiplier to a resultant output of the second multiplier to obtain an inverse response signal of a channel.

8. (New) The channel equalizer according to claim 7, wherein the absolute value of the inverse signal is fed back to the equalizer filter.

9. (New) The channel equalizer according to claim 7, wherein the second scale constant is set about 3 to 4 time larger than the first scale constant.

10. (New) The channel equalizer according to claim 2, wherein the first and second errors are a DD error and a Sato error, respectively.

11. (New) A channel equalizer comprising:

first means for correcting an error upon receipt of a signal transmitted by a sending end;

second means for calculating a decision-directed (DD) error upon receipt of the corrected signal from the first means;

third means for calculating a Sato error upon receipt of the corrected signal from the first means; and

fourth means for taking the absolute value of a real part and an imaginary part of the DD error calculated from the second means, and summing the absolute value of the real part and the absolute value of the imaginary part of the DD error to obtain a sum.

12. (New) The channel equalizer according to claim 11, further comprising:

fifth means for multiplying the Sato error output from the third means by a first scale constant; and

sixth means for multiplying a resultant output of the fifth means by the sum output from the fourth means.

13. (New) The channel equalizer according to claim 12, further comprising:

seventh means for multiplying the DD error output from the second means by a second scale constant; and

eighth means for adding a resultant output of the seventh means to a resultant output of the sixth means to obtain an inverse response signal of a channel.

14. (New) The channel equalizer according to claim 13, wherein the absolute value of the inverse signal is fed back to the first means.

15. (New) The channel equalizer according to claim 13, wherein the second scale constant is set about 3 to 4 time larger than the first scale constant.